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ABSTRACT

Early intervention has shifted in focus to family centered assessment and treatment. The Comprehensive Evaluation of Family Functioning was developed to meet the need for accurate family assessment, but limited psychometric information on the measure is available. The present research investigated the psychometric properties of the CEFF with a sample of 214 families having children with disabilities. Results of factor analytic techniques suggests that the CEFF can best be described with five lower order and two higher order factors. Reliability coefficients are adequate and validity analyses suggest that the CEFF is primarily a measure of stress. Implications for interventions and continued improvement of the CEFF are discussed. (Author)

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The Comprehensive Evaluation of Family Functioning: A Psychometric Assessment

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Running head: The CEFF

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Abstract

Early intervention has shifted to in focus to family centered assessment and treatment. The Comprehensive Evaluation of Family Functioning was developed to meet the need for accurate family assessment, but limited psychometric information on the measure is available. The present research investigated the psychometric properties of the CEFF with a sample of 214 families having children with disabilities. Results of factor analytic techniques suggests that the CEFF can be best described with five lower order and two higher order factors. Reliability coefficients were adequate and validity analyses suggest that the CEFF is primarily a measure of stress. Implications for interventions and continued improvement of the CEFF are discussed.

The Comprehensive Evaluation of Family Functioning: A Psychometric Assessment

In 1986, Public Law 99-457 was passed and the stage was set for significant expansion of appropriate early intervention services for all young children with disabilities (Bailey, 1992). This law also emphasized the importance of family-based support and intervention. Where the focus of intervention had previously been on the child, the focus of intervention now became the family unit. Although many researchers and practitioners have recognized the value of this philosophical shift to a family-centered approach (e.g., Adams, 1992; Bailey, 1987; Dunst, 1985), they have cautioned that moving to a family-centered approach will require assessing the needs of the family system and not just those of the child. Unfortunately, we do not yet know much about family assessment related to structuring effective early intervention programs.

Most previous early intervention research has been primarily child focused and, consequently, information about the families of children involved in efficacy studies and the effects of intervention on the family have been ignored (Casto & Lewis, 1984). Most commonly the only family information collected has been demographic. Such data clearly lacked the ability to describe salient aspects of

family functioning identified in the literature as important, such as stress, and available support and resources (Casto & Mastropieri, 1986). As such, much of the information potentially pertinent to intervention and outcome evaluation has not been assessed (Dunst, Snyder, & Mankinen, 1989). This lack of information about the family and the effects of intervention on families has resulted, in part, because there have been very few well tested, psychometrically sound measures of family functioning available for use.

In response to the increased emphasis in early intervention on assessing family functioning, there has been substantial effort over the past 10 years to develop instruments that can measure important aspects of family functioning with families of children with disabilities. A number of these instruments are now widely used in conjunction with early intervention programs. However, most of these measures were not specifically written for families with children with disabilities and thus the utility of existing family measures with a population of families of children with disabilities remains uninvestigated. For those measures that were written for this population, they typically focus on one aspect of family functioning. Additionally, researchers in the field have identified several important aspects of family assessment for this

population including: measuring appropriate constructs (e.g., stress, resources, support, family relationships, and use of time), having the measure available and at a reasonable cost, and being easy to administer and interpret while assessing a variety of related constructs (Mott et al, 1986).

While the multitude of recently developed family measures have given researchers and clinicians a variety of instruments from which to choose, research on the quality of the data derived from these instruments has lagged behind. Virtually all of the family measures lack sufficient psychometric information concerning reliability and validity to support their current usage. For instruments developed specifically for use with a population of families of children with disabilities, such as the Family Resource Scale (FRS; Dunst & Leet, 1985), the limited psychometric information available in the literature has been based on extremely small, non-representative samples. For instruments that have undergone more rigorous psychometric analysis such as the Parenting Stress Index (PSI; Abidin, 1990), information is based on data collected primarily from traditional or "normal" populations. Thus, the interpretation of data from these instruments when they are used with families of children with disabilities is questionable.

Considering the importance of family functioning in current early intervention programs and the potential impact on the type of intervention delivered, further investigation of the psychometric properties of measures of family functioning is essential. One measure that has been recently developed to meet the demands for family assessment is the Comprehensive Evaluation of Family Functioning (CEFF; McLinden, 1988). It is a logically developed instrument designed to be a quality and easily administered global family measure that assesses a variety of family functioning constructs specifically for families with children with disabilities.

The purpose of this research was to investigate the psychometric properties of the CEFF, and the potential uses and limitations of this instrument. The analyses conducted for this study employed a data set collected by the Early Intervention Research Institute (EIRI). This data set includes information on over 200 families with children with disabilities.

Design and Sample

The 214 families included in this data set represent a wide variety of demographic characteristics, types of early intervention programs, types and severities of disabling conditions, and geographic locations across the country.

Because it is a relatively large data set of children who are participating in the types of programs typically offered, it provides an ideal opportunity to assess the psychometric soundness of measures of family functioning as they will typically be used in conjunction with early intervention programs.

Families in the data set were participating in a variety of early intervention programs and were assessed annually on various measures of family and child functioning. Extensive information on the training and monitoring procedures, demographic characteristics of participants, the types of early intervention programs in which children were participating, and the procedures for checking the accuracy of the data are described elsewhere (White et al., 1987) Table 1 shows a brief description of the sample.

Insert Table 1 here

Procedures

This section will describe the CEFF and the other measures used for the examination of convergent and discriminant validity. All of these measures were completed at the same time, usually by the mothers. Participants were

reimbursed for their participation.

Description of Measures

The Comprehensive Evaluation of Family Functioning was developed specifically for use with families of young children with special needs. The CEFF was designed to assess family functioning in the areas of time demands (6 items), acceptance of the child (11 items), coping (7 items), social relationships (7 items), financial impacts (2 items), well-being (6 items), and sibling relationships (12 items). The scale contains 51 items reflecting both feelings and events which may occur in the family. The respondent indicates both the frequency with which the feeling or situation occurs using a Likert scale (1=never to 5=always), as well as whether or not the feeling or situation represents a problem for them. This dual-response format was designed to ensure that the data from the scale would provide information on not only the extent to which either positive or negative feelings and situations would occur, but also the parent's perception of whether or not this represented a problem for them. For example, one of the CEFF Time Demands items is, "Our daily schedule is centered around the needs of our child with special needs." Potentially, one mother who indicates that this is "always" the case would not find this to be a problem; however, another mother who indicates that this occurs "most of the

time" might feel that it is problematic. This type of information may be important for tailoring strategies which specifically target the identified problems of the parents and family.

The CEFF thus yields two scores for each scale and total CEFF derived from 1) the Likert values added together, and 2) the number of items considered problematic.

Following the 51 items in the main section of the scale is a list of 11 situations in which parents of children with special needs frequently find themselves. These items were created based on discussions with parents, who indicated that their difficulties in these situation could be addressed by an intervention program. Respondents are asked to rate the level of stress which they associate with these items on a scale from 1 (not at all stressful) to 5 (highly stressful). This scale does not contain the problem responses, and only yields a total score.

Additional Measures

Five additional measures of family functioning will be used to determine the concurrent validity of the CEFF. These include the Parenting Stress Index, the Family Adaptability and Cohesion Scales, the Family Support Scale, the Family Resources Scale, and the Family Inventory of Life Events and Changes. Each will be briefly discussed.

The PSI has 101 items that measure stressors associated with parenting and being a parent. The scale is divided into two main subscales. These subscales are child related stress and other related stress, are measured by statements where the response scale is Likert and ranges from "strongly agree" to "strongly disagree." The child related stress scale covers stress related to the child that most concerns the respondent. This scale is further divided into six subscales: adaptability, acceptability, demandingness, mood, distractibility/hyperactivity, and reinforces parent. The other related stress scale is also divided into subscales: depression, attachment, restrictions of role, sense of competence, social isolation, relationship with spouse, and parent health. Lower scores represents less stress.

The Family Adaptability and Cohesiveness Scale (FACES III; Olson, Portner, & Lavee, 1985) has 20 items that measure the adaptability and cohesion of the respondent's family. The test presents descriptive statements about family behaviors, attitudes, and feelings. Item responses are on a Likert scale with responses ranging from "almost never" to "almost always." High scores on both scales implies a balanced family type. Decreasing scores imply a less well balanced family type.

The Family Resources Scale (FRS; Dunst & Leet, 1985) is a 30 item questionnaire that measures the adequacy of time

and economic resources for families with small children. Responses uses a Likert scale ranging from "not at all adequate" to "almost always adequate." Two subscales will be reported for the FRS: time and financial resources. The FRS yields scores for each of the subscales and a total score, with higher scores indicating more resources for the respondent's family.

The Family Support Scale (FSS; Dunst, Jenkins, & Trivette, 1984) is an 18 item questionnaire that measures the amount of perceived support given to the parents of young children with disabilities. The FSS uses a Likert scale with responses ranging from "not at all helpful" to "extremely helpful." The FSS measures support from family, friends, social groups, and professional service providers, with higher scores indicating more support.

The Family Inventory of Life Events and Changes (FILE; McCubbin, Patterson, & Wilson, 1983) is a questionnaire that measures the presence (or absence) of 71 life events that may have occurred over the last 12 months to blood relatives or those with whom the respondent has a long term commitment. The responses are all dichotomous, with only "yes" (the life event or change occurred) or "no" (the life event or change did not occur) as choices. The total score of the FILE reflects only the number of items with a positive response, not the magnitude of the life events

themselves.

Data Analysis Procedures

This methodological section will be presented in four steps and describe an overall process for dealing with the CEFF individually, and then in concert with the other measures. The methodologies used in this study comprise a means of establishing the three main indices of test usefulness (American Psychological Association, 1985; Crocker & Algina, 1986): 1) reliability, 2) validity, and 3) normative data.

Establishing Scale Structure

Factor analytic techniques were used to investigate the underlying factor structure which best fit the data (Gorsuch, 1983). First, a principal components analysis was conducted to identify items that were not contributing to the instrument. Any items showing weak communalities (below .20) were removed and the analysis repeated.

Second, common factor extraction procedures were used to provide the "best" factor structure. The final structure was extracted using maximum likelihood estimates. In addition, both orthogonal (uncorrelated) and oblique (correlated) factor rotations were investigated. Although orthogonal rotations are traditional for most factor analyses, oblique solutions were considered to ensure the best possible fit to the data. The final structure was used

for all additional analyses.

Establishing Reliability

Internal consistency using Cronbach coefficient alphas was computed for each of the subscales and the total scores for each measure using the modified scale structure from the above factor analysis. In addition, test-retest reliabilities were computed on a subsample of 130 subjects over a two-week period.

Establishing Validity

Concurrent validity was measured by computing convergent and divergent validity coefficients. These correlations were investigated using the various subscales and total scores of the additional five family measures. These correlations will help establish the degree to which these scales measure similar and unique constructs.

Establishing Norms

A full description of normative data will help future users to more properly interpret their data. Normative data is essential for the accurate interpretation of test data because it indicates how typical or atypical a score is. These norms will be reported as means, standard deviations, and percentile scores.

The last methodological issue is that of dealing with the dichotomous responses of whether the stress measured by any item was problematic. First, correlations between the

Likert response and the problematic response were computed. And, second, the percentages of those that reported a problematic response were given as additional normative data.

Results

The initial principle components analysis indicated the presence of 5 weak items (i.e., communalities below .20).[1] The first of these was a stress item (item 57) that dealt with parking for the disabled. The other weak items came from the author's Coping Scale. Two of items (items 18 and 19) measured family communication, and the other two (items 23 and 24) measured social support. Because of the poor characteristics of these five items, they were dropped from the final analyses, but will be discussed later in the paper. The final analyses were then conducted with the remaining 56 items.

Two separate factor analyses were then conducted. The first used the item pools from each scale as defined by the author (i.e., the Time Demands items). The purpose of this analysis was to give preliminary information regarding the integrity of each scale. Result of these analyses supported the conclusion that the 5 items identified as weak did not perform well within any of the scales.

The results of a complete factor analysis indicated

that the CEFF was best described by a six factor solution using a maximum likelihood extraction and an oblique rotation. This solution, however, divided the Sibling Relationship scale into two separate scales. An investigation of 3, 4, and 5 factor solutions revealed that, with fewer factors the Sibling Relationships scale could load on only one factor (e.g., with 3 and 4 factor solutions). However, these solutions were less parsimonious, with more double loadings and an overall less simple structure. Factor loadings from the six factor solution are given in Table 2. These factors include: Sibling Relationships 1, Sibling Relationships 2, Well Being, Stress, Normalcy, and Differences.

Insert Table 2 here

Finally, a higher order factor analysis was conducted using the correlation matrix from the oblique 6 factor solution. Interfactor correlations are presented in Table 3. In the higher order analysis, Sibling Relationships was reconstituted, and two higher order factors, Normalcy and Differences, were described. Factor loadings from this analysis are presented in Table 4.

Insert Tables 3 and 4 here

As will be discussed later, the CEFF may still be best described by five lower order factors, thus joining the two Sibling Relationships scales. This was done because some families did not have children other than the child with disabilties, and this may have caused the difficulties with this scale (additional ramifications of this will be discussed later). Consequently, for subsequent analyses, five lower order factors were used. Internal consistency reliability coefficients for the CEFF total score and all subscales are reported in Table 5. As can be seen, the reliabilities for the CEFF are high for this type of measure indicating considerable consistency within scales and the total CEFF across subjects. Additionally, test-retest reliability for the total CEFF score was .83 for the Likert scale, and .86 for the total dichotomous or problem items. Test-retest reliability coefficients for the other subscales ranged from .72 to .86.

Insert Table 5 here

Table 6 shows the concurrent validity coefficients of the CEFF with the scale and total scores of the other 5

measures. These correlations ranged from .00 to .51 in magnitude. Table 7 shows the correlations between the CEFF and various child and family demographic information. The correlations in both tables indicate that the CEFF discriminates from some of the other demographic variables and family measure constructs, and converges with the others at a variety of magnitudes.

Insert Tables 6 and 7 here

Tables 8 and 9 show the normative data in the form of means, standard deviations, and percentiles for each of the scale and total scores. Additionally, Table 10 shows the results of the correlations between the Likert responses and the dichotomous problematic responses. This are listed by item within each scale, and along side, the percentage of subjects identifying the content of the item being problematic for them.

Insert Tables 7, 8, and 9 here

Discussion

The results of the factor analysis show that the CEFF can be interpreted with a rather simple structure that

includes five subscales, and two higher order scales. Although these do not follow the original outline for the CEFF, but may provide a clearer understanding of what the CEFF actually measures.

The five items eliminated for poor communalities were not unexpected given their context. For instance, it is not surprising that the stress item concerning "parking spaces for the handicapped" did not load consistently on the Stress scale. Most of the subject children in this sample did not suffer from such severe motor impairments that special vehicles were required.

The solution described in Table 2 shows six factors. Two of these factors were in line with the scales hypothesized by the author (Well Being and Stress). Interestingly, the results of the factor analysis split the Sibling Relationships scale. Examination of item content shed no light on the reason for this, however, the fact that 15% of the sample had only one child probably accounted for this discrepancy. Thus, a better structure for scoring and interpreting the CEFF may be to have only five lower order factors. However, further investigation will be necessary before a definitive statement can be made. Where necessary, information from one child and more than one child families were split so that the interpretations made sense.

The lower order scales would then be described as: Well

Being, Stress, Sibling Relationships, Normalcy and Differences. These last two factors were initially confusing as the only immediately identifiable difference in the constructs was the positive or negative wording of the items. All of the more positive items (e.g., the child makes progress, the child is acceptable) loaded on Normalcy, and all of the more stressfully worded items (e.g., I worry about the child's future, I envy other parents) loaded on Differences. If these items were measuring the same construct, the items could be all on a single scale but with opposite loadings. Examination of item content revealed that one scale dealt with the difficulty in dealing with a child with disabilities, while the other addressed the issue of how "normal" the child was or how "normal" can your life be with a child with disabilities. Thus, these two scales were accepted as constructs relating the differences inherent in a child with disabilities, and the normalcy of a child with disabilities. A similar pattern was seen with the higher order factors. Sibling Relationships, which generally dealt with typical family behaviors, paired with the Normalcy scale to make a higher order Normalcy factor. Likewise, Stress and Well Being, which mainly dealt with coping with a child with special needs, paired with Differences to make a higher order Differences factor.

The reliability results indicate that the CEFF scores

are highly consistent across subjects for all of the subscales, both higher order scales, and the total score. Test-retest data from the subsample also indicate that the CEFF scores are stable over time for the subscales, and both total scores.

The validity data show that the CEFF is primarily a measure of stress as can be seen by the high correlations with the PSI. The higher correlations between the CEFF and the Time scale of the FRS as opposed to the Financial scale of the FRS seem to indicate that the stressors are more related to time than financial status. This suggests that interventions built on time management strategies as opposed to a financially based intervention may be more appropriate with this population.

The Differences scales of the CEFF correlates more highly with the PSI child related stress than with the Other related stress, while the Normalcy scales seemed to correlate with both at an equal, and lessor, degree. This may mean that the Differences scales discriminates between child and other related stress while the Normalcy scale does not. The Well Being scale correlated highly with both the PSI Parent Health scale and the FRS Time scale suggesting that the health and well being of the parent can be improved by means of decreasing time burdens. The moderate correlations with the other measures show that the CEFF

shares some variance with the other family measures while not being redundant.

Lower correlations ($r < .40$) are found between the CEFF and the FILE. Even lower correlations ($r < .30$) are found between the CEFF and the FACES-III and the FSS. This suggests that the CEFF does not assess these constructs well.

Correlations with the demographic variables suggests that there is a strong relationship between the Differences scale and child functioning. This shows the important relationship between family and child for this population. Another interesting correlation was that between the Sibling Relationship scale and the number of siblings. This small relationship indicates that the number of children has little to do with the kind of relationship that they manifest. Finally, the low correlations found in gender and some of the parent variables indicate that the CEFF does not discriminate between genders of the child or of the levels of parent education or financial standing.

The information regarding the problem responses of the CEFF is interesting. There is a definite relationship between the frequency of subjects considering the content of an item as problematic (column 2 of Table 8) and the correlation between the Likert and problem response (column 1 of Table 8). The mere fact that the frequency of

stressful events correlates with the perception that it is problematic does not mean that the problem itself is necessarily more frequent. However, this appears to be the case with the CEFF. Notice that the items related to time availability and well being are most often problematic. This is further indication that the CEFF measures stress in terms of time demands. The lower values occured in the Sibling Relationships scale. This may indicate that these relationships have little if any affect on family stress.

The CEFF was written to address a need within family assessment for families with children with disabilities and has the potential to serve as a useful tool in efforts to meet the requirements of P.L. 99-457. It was designed to measure the most salient aspects of family functioning for these families, while being economical to administer. It can be used as an outcome measure for research on early intervention efficacy, as well as for program planning and evaluation of services for families of young children with special needs. Despite the fact that the CEFF is not as comprehensive as it may purport to be, and further work on the instrument may be necessary, it is still a highly reliable instrument that assesses stressors of being a parent of a child with disabilities.

Endnote

1 Item 6 of the CEFF was not included in any analyses because the response is dependent upon the employment status of the subject, thus the respondents could only answer item 6a or 6b. The results of this made the item incomplete for all listwise paired analyses.

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Table 1

Description of Sample

Demographic Characteristics

Maternal Education (yrs)	Mean = 13.2 Range = 8 to 17		
Maternal Marital Status			
Married	83%	Single	17%
Paternal Education (yrs)	Mean = 13.6 Range = 7 to 19		
Paternal Occupation			
Unemployed	11%	Technical	28%
Unskilled	18%	Professional	13%
Blue Collar	30%		
Income ($)	Mean = 24,500 SD = 14,600		
Number of Siblings	Mean = 1.8 SD = 1.3 Range = 0 to 7		

Characteristics of Children

Age of Children at Assessment (months)	Mean = 62 SD = 18		
Gender of Children	Male = 55% Female = 45%		
Developmental Functioning(DQ)			
40 and below	11%	56 - 70	33%
41 - 55	27%	70 and above	29%

Nature of Early Intervention Programs

Frequency of Contact		Type of Intervention	
Once per month	3%	Home-based	24%
Once per month - once per week	0%	Center-based	24%
More than once a week	97%	Combined home- & center-based	52%

Table 2

Factor loadings for six factor oblique solution

Sibling Relationships 1	
Other children willingly help with care	.787
Other children complain about their sibling	.587
Other children are embarrassed by their sibling	.492
Other children are accepting of their sibling	.716
Other children ask questions about sibling's needs	.795
Other children discipline their sibling	.749
Other children help their sibling make friends	.820
Other children help their sibling to learn	.932
Sibling Relationships 2	
Other children play with child with special needs	.805
Other children show affection toward child with special needs	.721
Other children fight with my child with special needs	.577
Able to give as much attention to other children	.710
Normalcy	
Can find a reliable person to care for my child when I need to	.523
Treat child with special needs same as any other child	.540
Child with special needs makes progress in behavior	.754
Having family member with special needs is acceptable to me	.653
Take child with me when doing routine errands in community	.526
Feel comfortable discussing child's problems with others	.631
Feel capable of handling demands of raising child	.669
Willing to get help from others in raising child	.655
Having child with special needs helps in dealing with problems	.556
Relatives are supportive of me and my child with special needs	.524
Friends are supportive of me and my child with special needs	.536
Child is accepted by relatives	.436
Child is accepted by people in the community	.481

Table 2 (cont)

Factor loadings for six factor oblique solution

Stress	
Participating in child's program at school	.646
Hearing the results of testing	.613
Making hospital or clinic visits	.646
Dealing with doctors	.761
Dealing with other professionals who work with child	.912
Taking child with me when doing routine errands	.403
Leaving child with a babysitter	.403
Traveling with child	.436
Explaining child's special needs to others	.599
Trying to find services for child	.479
Well Being	
I am depressed	.717
I feel fatigued	.678
I have minor illnesses	.593
I feel happy	-.539
I feel energetic	-.574
I sleep well	-.426
Differences	
Demands of caring for child make it hard to complete tasks	.611
Spend more time with child than other family members	.733
Demands of caring for child makes time for self difficult	.727
Daily schedule centered around needs of child	.814
Use terms such as "special needs" or "developmental delay"	.589
Consider child to be normal in most respects	-.428
Treat child with special needs "specially"	.652
Worry about child's future	.389
Envy parents who don't have child with special needs	.514
Feel that having a child with special needs is difficult	.670
Demands of caring for child limits time with family & friends	.705
Ability to take vacations is affected by caring for child	.694
Child has other children to play with	-.383
Family gives up things because of expenses of caring for child	.365
Spend more money on child w/special needs than other children	.432

Table 3

Interfactor correlations for six factor oblique solution

	Sibling Rel 1	Differ	Normalcy	Stress	Sibling Rel 2	Well Being
Sibling Rel 1	1.000					
Differences	.214	1.000				
Normalcy	.066	-.017	1.000			
Stress	.123	.432	.084	1.000		
Sibling Rel 2	.387	-.168	.168	.026	1.000	
Well Being	.040	.368	-.209	.312	-.090	1.000

Table 4

Higher order factor loadings

	Differences	Normalcy
Differences	.813	
Stress	.733	
Well Being	.707	
Sibling Relationships 2		.803
Sibling Relationships 1		.719
Normalcy		.500

Table 5

Internal consistency reliability coefficients for CEFF scales

Lower order scales		
Differences	(14 items)	.89
Stress	(10 items)	.89
Well Being	(6 items)	.85
Normalcy	(14 items)	.84
Sibling * Relationships	(12 items)	.82
Higher order scales		
Differences	(30 items)	.94
Normalcy *	(26 items)	.86
Total CEFF *	**(56 items)**	**.94**

* These reliabilities were computed for families with children in addition to the one with disabilities

Table 6

Concurrent validity coefficients with the five additional measures of family functioning

	Differences	Normalcy	Well Being	Siblings*	Stress
FSS Total	.01	-.14	-.04	-.14	-.03
PSI Child	.43	.40	.36	.32	.35
PSI Parent	.26	.36	.36	.17	.34
PSI Total	.38	.43	.41	.26	.39
FRS Time	-.33	-.34	-.47	-.23	-.41
FRS Money	-.20	-.33	-.34	-.15	-.23
FACES Cohesion	-.21	-.22	-.25	-.29	-.29
FACES Adapt	.02	.02	.05	.06	-.03
FILE Total	.26	.22	.33	.15	.35

* These correlations were computed for families with children in addition to the one with disabilities

Table 6 (cont)

Concurrent validity coefficients with the five additional measures of family functioning

	Higher Order Differences	Higher Order Normalcy*	Total*
FSS Total	-.02	-.21	-.15
PSI Child	.45	.43	.52
PSI Parent	.35	.32	.39
PSI Total	.45	.41	.50
FRS Time	-.44	-.33	-.44
FRS Money	-.27	-.28	-.29
FACES Cohesion	-.29	-.32	-.35
FACES Adapt	.00	.04	.05
FILE Total	.35	.22	.34

* These correlations were computed for families with children in addition to the one with disabilities

Table 7

Concurrent validity coefficients with child and family variables

	Differences	Normalcy	Well Being	Siblings*	Stress
Child Variables					
Child Gender	-.04	.00	-.03	-.01	-.05
Child Age	-.15	.05	-.10	.17	-.15
Child Functioning					
Battelle Total Raw Score	-.32	-.08	-.11	.09	-.26
Developmental Quotient	-.47	-.28	-.06	-.22	-.26
Family Variables					
Number of children in the home	-.03	.11	-.06	.15	-.02
Marital Status of the mother	.01	.10	-.03	.01	-.11
Father's Education	.10	.01	-.03	-.09	.01
Mother's Education	.18	.06	.04	.02	.14
Family Income	.12	-.01	.00	.00	.03

* These correlations were computed for families with children in addition to the one with disabilities

Table 7 (cont)

Concurrent validity coefficients with child and family variables

	Higher Order Differences	Higher Order Normalcy*	Total*
Child Variables			
Child Gender	-.05	.00	-.01
Child Age	-.16	.09	-.14
Child Functioning			
Battelle Total Raw Score	-.30	-.03	-.29
Developmental Quotient	-.37	-.31	-.40
Family Variables			
Number of children in the home	-.04	.13	.01
Marital Status of the mother	-.05	.07	-.02
Father's Education	.06	-.06	-.01
Mother's Education	.16	.05	.09
Family Income	.07	-.01	.04

* These correlations were computed for families with children in addition to the one with disabilities

Table 8

Normative data for the CEFF

	Mean	Standard Deviation	Problems
Differences	34.0	(10.9)	2.2
Well Being	14.8	(3.9)	1.2
Stress	21.2	(9.4)	
Higher Order Differences	70.0	(21.0)	3.3
Normalcy	26.5	(7.6)	1.7
Sibling * Relationships	26.8	(7.8)	1.0
Higher Order Normalcy *	53.8	(12.7)	2.8
[**]	22.9	(8.6)	1.1
Total *	**125.2**	**(29.5)**	**6.1**
[**]	**85.4**	**(28.8)**	**3.6**

* These statistics were computed for families with children in addition to the one with disabilites

** These statistics were computed for families with just the one child

Table 9

Percentiles

Comprehensive Evaluation of Family Functioning

Percentiles	10-----20-----30-----40-----50-----60-----70-----80-----90-----99
Differences	20-----25----28------31-----34-----36-----39------43----47-----60
Well Being	-10--11-----12-----13-------14------15----16----17------19-----26
Stress	-11-----13----15-----17-----19------22----25-----29-----33-----44
Higher Order Differences	45-----53-----59------64----69------74----79-----88-----96----122
Normalcy	17-----20-------22----24----26------28----30-----32-----37-----42
Sibling Rel	18---21--22---24--25--26---27-----29----30--------32----35-----42
Higher Order Normalcy *	38-----43-----47-----51-----53-----57-----60-----64-----70-----81
Total *	90-----98----106----114----124----131----140----152----164---191
Higher Order Normalcy **	6------17-----20-------22---24-------27-------------28---31----38
Total **	20-----76-----78-----85-----92-----95-----99----105----112----124

* Computed for families with other children
** Computed for families with just the one child

Table 10

Relationship beween CEFF problem and Likert responses

ITEM	r	%	ITEM	r	%
Differences			Normalcy		
1	.55	19%	20	.33	12%
2	.38	22%	21	.21	11%
4	.52	23%	22	.15	6%
5	.38	11%	25	.57	11%
27	.54	15%	26	.42	7%
28	.64	17%	29	.50	8%
32	.51	13%	30	.46	11%
33	.42	10%	31	.63	24%
8	-.06	6%	3	.53	28%
9	.27	10%	7	.32	9%
10	.28	8%	12	.49	17%
11	.52	36%	14	.45	7%
13	.42	12%	16	.26	14%
15	.51	2[illegible]%	17	.35	7%
Total	**.63**		**Total**	**.54**	
Well Being			Sibling Relations *		
34	.61	25%	40	.32	11%
35	.51	30%	41	.44	9%
36	.57	13%	42	.30	6%
37	.57	10%	43	.18	15%
38	.57	22%	44	.39	9%
39	.59	19%	45	.52	6%
Total	**.73**		46	.53	16%
			47	.41	6%
Higher Order Differences			48	.01	4%
			49	-.09	9%
Total	**.71**		50	.20	6%
			51	.13	6%
			Total	**.42**	
CEFF Total*	**.70**				
			Higher Order Normalcy *		
			Total	**.52**	

* These statistics were computed for families with children in addition to the one with disabilities